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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/998,008

11/28/2001

Stephen R. Mooney

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3876

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7590

11/22/2005

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EXAMINER

HAMANN, JORDAN J

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/998,008		MOONEY ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Jordan Hamann		2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 27-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 10-18, 27-28, 30-31, 34-38 and 41 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9, 29, 32, 33, 39 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

The amendments to the specification and the replacement drawing received on 10-20-05 are accepted. Accordingly the objections to the drawings have been overcome and are respectfully withdrawn.

The amendment to the title is accepted.

Applicant's arguments, see page 10 last paragraph, filed 10-17-05, with respect to the objection to the specification because it fails to include a brief summary have been fully considered and are persuasive. Therefore, the objection to the specification has been withdrawn.

Applicant's amendment to claim only a bus with a plurality of lines, excluding a bus with a single line, overcomes the teachings of Schneider. Accordingly, the 102(b) rejections of claims 1 and 2 in view of Schneider are respectfully withdrawn, and the 103(a) rejection of claim 16 in view of Goodnow further in view of Schneider is respectfully withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 19-26 have been cancelled.

#### ***Claim Rejections - 35 USC § 103***

Claims 1-3, 6-8, 10-18, 27-28, 30-31, 34-38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodnow et al (US 6,141,351).

With respect to claim 1, Goodnow discloses a system comprising a bus having a plurality of lines (Figure 2 Element 28);

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a first device having a first transmitter to transmit first signals in a first frequency band over the bus and having a receiver to receive second signals in a second frequency band over the bus while first signals are transmitted over the bus (Figure 2 Element 24 and column 3 lines 61-63); and

a second device to communicate with the first device over the bus, the second device having a second transmitter to transmit second signals in the second frequency band over the bus (Figure 2 Element 26 and column 3 lines 61-63),

wherein the first frequency band and the second frequency band occupy different portions of a frequency spectrum (Figure 3 and column 3 lines 4-6).

Figure 2 and column 3 lines 61-63 are interpreted as first and second devices (Elements 24 and 26) simultaneously communicating with each other via first and second signals over the bus.

Goodnow does not expressly state that the communication between the first and second devices over the bus occurs on the same one line of the bus.

However, at the time of the invention it would have been obvious to a person of ordinary skill in the art to transmit the first and second signals between the first and second devices of Goodnow on one line of the bus to maximize bandwidth utilization while keeping the number of lines at a minimum.

With respect to claim 2, Goodnow discloses the system of claim 1, however does not expressly disclose wherein the first transmitter includes a filter having a cutoff frequency to define at least in part the first frequency band.

The transmitting portion of Goodnow (Figure 2 Elements 24 and 26 Sending System) inherently includes a filter to define the frequency bands shown in Figure 3.

With respect to claim 3, Goodnow discloses the system of claim 1 wherein the first transmitter includes an encoder to define at least in part the first frequency band (Figure 2 Element 24).

With respect to claim 6, Goodnow discloses the system of claim 1 wherein the first transmitter and the receiver are part of a single chip (Figure 2 Element 24).

With respect to claim 7, Goodnow discloses the system of claim 1 wherein the first frequency band and the second frequency band are fixed (column 1 lines 64-65).

With respect to claim 8, Goodnow discloses the system of claim 1 comprising a band setting unit to set the first frequency band and the second frequency band in response to an input signal (Figure 2 Elements 30 and 24 and column 1 lines 65-67 – column 2 lines 1-3).

With respect to claim 10, Goodnow discloses the system of claim 8 comprising a first arbitration module and a second arbitration module to arbitrate between one another to generate the input signal (Figure 2 Elements 30 and 24).

With respect to claim 11, Goodnow discloses the system of claim 1 wherein the first transmitter and the receiver are associated with a microprocessor (Figure 1 Element 18).

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With respect to claim 12, Goodnow discloses the system of claim 1 wherein the first transmitter and the receiver are associated with a memory storage device (Figure 1 Element 22).

With respect to claim 13, Goodnow discloses the system of claim 1 wherein the first transmitter and the receiver are associated with a chipset (Figure 1 Element 20).

With respect to claim 14, Goodnow discloses the system of claim 1 wherein: the first transmitter includes a first output connected to the one line of the bus; the second transmitter includes a second output connected to the one line of the bus; and the receiver includes an input connected to the one line of the bus (Figure 1 Element 20 and Figure 2 Elements 24 and 26).

With respect to claim 15, Goodnow discloses a device comprising:

a transmitter to transmit first signals in a first frequency band over a bus over which the device is to communicate with another device (Figure 2 Element 24 Sending System);

a receiver to receive second signals in a second frequency band the bus while first signals are transmitted over the bus (Figure 2 Element 24 Receiving System),

wherein the first frequency band and the second frequency band occupy different portions of a frequency spectrum (Figure 3 and column 3 lines 4-6); and

a functional portion to transmit signals using the transmitter and to receive signals using the receiver (Figure 2 Element 24).

Goodnow does not expressly state that the first and second signals are on the same one line of the bus.

However, at the time of the invention it would have been obvious to a person of ordinary skill in the art to transmit the first and second signals of Goodnow on one line of the bus to maximize bandwidth utilization while keeping the number of lines at a minimum.

With respect to claim 16, Goodnow discloses the device of claim 15, however does not expressly disclose wherein the transmitter includes a filter having a cutoff frequency to define at least in part the first frequency band.

The transmitting portion of Goodnow (Figure 2 Elements 24 and 26 Sending System) inherently includes a filter to define the frequency bands shown in Figure 3.

With respect to claim 17, Goodnow discloses the device of claim 15 wherein the transmitter includes an encoder to define at least in part the first frequency band (Figure 2 Element 24).

With respect to claim 18, Goodnow discloses the device of claim 15 wherein the first frequency band and the second frequency band are fixed (column 1 lines 64-65).

With respect to claim 27, Goodnow discloses a method comprising;  
transmitting by a first device first signals in a first frequency band over a bus over which the first device is to communicate with a second device(Figure 2 Element 24 and column 3 lines 61-63); and

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receiving by the first device second signals in a second frequency band over the bus while first signals are transmitted over the bus (Figure 2 Element 24 and column 3 lines 61-63),

wherein the first frequency band and the second frequency band occupy different portions of a frequency spectrum (Figure 3 and column 3 lines 4-6).

Goodnow does not expressly state that the communication between the first and second devices over the bus occurs on the same one line of the bus.

However, at the time of the invention it would have been obvious to a person of ordinary skill in the art to transmit the first and second signals of Goodnow on one line of the bus to maximize bandwidth utilization while keeping the number of lines at a minimum.

With respect to claim 28, Goodnow discloses the method of claim 27 wherein transmitting first signals includes encoding an output to form a first signal in the first frequency band (Figure 2 Element 24).

With respect to claim 30, Goodnow discloses the method of claim 27 comprising setting the first frequency band and the second frequency band (Figure 2 Elements 30 and 24 and column 1 lines 65-67 – column 2 lines 1-3).

With respect to claim 31, Goodnow discloses the method of claim 30 wherein the setting comprises arbitrating between the first and second devices (Figure 2 Elements 30 and 24).

With respect to claim 34 Goodnow discloses the system of claim 1 wherein the second device has a receiver to receive first signals over the bus while second signals are transmitted over the bus.



Goodnow does not expressly state that the communication between the first and second devices over the bus occurs on the same one line of the bus.

However, at the time of the invention it would have been obvious to a person of ordinary skill in the art to transmit the first and second signals between the first and second devices of Goodnow on one line of the bus to maximize bandwidth utilization while keeping the number of lines at a minimum.

With respect to claim 35, Goodnow discloses the device of claim 15, wherein the functional portion is a processor (Figure 1 Element 18).

With respect to claim 36, Goodnow discloses the device of claim 15, wherein the functional portion is memory (Figure 1 Element 22).

With respect to claim 37, Goodnow discloses the device of claim 15, wherein the functional portion is a controller for a chipset (Figure 1 Element 20).

With respect to claim 38, Goodnow discloses the device of claim 15, wherein the transmitter, receiver, and functional portion are part of a single chip (Figure 1 Elements 24 and 26).

With respect to claim 41, Goodnow discloses the device of claim 15, comprising an arbitration module to set the first frequency band (Figure 2 Elements 30 and 24 Modulation System).

#### ***Allowable Subject Matter***

Claims 4-5, 9, 29, 32-33 and 39-40 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan Hamann whose telephone number is (571) 272-8564. The examiner can normally be reached on Monday-Thursday 8:30-5:00 and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJH



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